



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,930	07/05/2001	Yutaka Tanaka	862.C2285	1834

5514 7590 05/15/2003

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

NGUYEN, HUNG

ART UNIT	PAPER NUMBER
----------	--------------

2851

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/897,930

Applicant(s)

TANAKA ET AL. *M*

Examiner

Hung Henry V Nguyen

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. Figure 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 5-8, the recitation of (for example) "wherein to supply the gas which is the same as in said process chamber to said load lock chamber....and to supply the gas which is the same as in said clean booth to said load-lock chamber" is vague and indefinite. It is not clearly understood and confusing the applicant is claiming that the gas supplied to the load-lock chamber is the same type of gas (for instant: helium or nitrogen) used in the process chamber or the applicant is claiming that the gas in the process chamber is reused/or re-circulated to the load-lock chamber.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

As the best the claimed subject matters are understood, (see rejection under 35 U.S.C. 112, second paragraph, supra). Claims are anticipated by references.

5. Claims 1-4, 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasegawa et al (U.S.Pat. 5,871,587).

With respect to claims 1, and 9, Hasegawa (fig.3) discloses a sample processing device comprising all basic structures as set forth in the instant claims such as: a process sample (101) for processing the sample (124) in a predetermined atmosphere; a load lock chamber (133) connected to the process chamber; a transfer mechanism (AGV) for transferring the sampler between the load –lock chamber and another unit or container (see col.4, lines 64-67); a clean booth (130) which covers a transfer path of the transfer mechanism (see fig.3) and a transfer atmosphere forming mechanism (107, 109, 110-112) for flowing a clean gas in the clean booth; wherein the pressure.

As to claims 2-3, Hasegawa teaches the atmosphere forming mechanism including a supply source of the gas (helium supply line 107 a-b; col.5, lines 56-65); a filter (107c) placed between the supply source of the gas and the transfer path; an a straightening plate (A, B) for passing the gas from the filter, which has passed through the transfer path.

As to claim 4, Hasegawa teaches in the load-lock chamber (133), a gas control mechanism for supplying a clean gas (helium gas) which is the same as in the process chamber (101) (see col.5, lines 18-21).

As to claim 10, Hasegawa teaches an exposure apparatus (121-124; see col.4, lines 40-57) disposed in the process chamber (101).

As to claim 11, Hasegawa teaches another unit comprises a coater/developer (131-132).

6. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Moriya (U.S.Pat. 5,578,129).

With regard to claims 1-2, 9, Moriya discloses a sample processing system comprising all of the basic limitations as set forth in the instant claims including: a processing chamber (61) for processing the sample (W) in a predetermined atmosphere; a load-lock chamber (71) connected to the process chamber; a transfer mechanism (83) for transferring the sample between the load-lock chamber and another unit or container; a clean booth (81) which covers a transfer path of the transfer mechanism and a transfer atmosphere forming mechanism including filters (82) for flowing a clean gas in the clean room in a laminar fashion (see col.12, lines 53-54; and see fig.8, and col.6, line 27-30).

As to claim 3, a straightening plate is seen to be an inherent device (see element 55 in see fig.8) for passing the gas from the filter.

As to claims 4 and 7, Moriya further teaches a gas control mechanism (25, 31-36) or supplying a clean gas which is the same as in the processing chamber and an exhausting device (26) for extracting the gas from the load-lock chamber (see col.4, lines 15-49)

Art Unit: 2851

As to claims 5-6 and 8, Moriya teaches gates arranged between the load-lock chamber and the process chamber and between the load lock chamber and the clean booth (see col.3, lines 50-65 and fig.8), Moriya further teaches "the inside gas of the load-lock chamber is replaced with the atmosphere gas identical to that of the processing chamber" (see col.4, lines 43-59).

As to claims 10-11, Moriya teaches the processing device comprising exposure apparatus (W, 66-67) in the process chamber and the another unit comprising a coater/developer (see col.12, lines 25-26 and fig.8).

As to claims 12-13, the method claims are seen to be inherent teachings in existence of the above apparatus (also, see col.1, lines 38-60).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al (U.S.Pat. 5,871,587).

With respect to claims 5-8, Hasegawa et al teaches a sample processing device comprising substantially all of the limitations of the instant claim as discussed. Hasegawa specifically teaches the process chamber (101), the load-lock chamber (133) and the clean booth (131) being supplied a same clean gas via a gas control mechanism (for example, a helium gas to prevent oxidation; see col.5, lines 18-10). Hasegawa does not expressly disclose the "clean gas

Art Unit: 2851

in the process chamber being supplied to the load-lock chamber and the clean gas in the clean booth being supplied to the load-lock chamber. In other words, Hasegawa lacks to disclose the same gas in the process chamber and the clean booth being reused in the load-lock chamber as specified in claims 5-8. However, Hasegawa suggests that "a device for introducing an ambience gas having being used in said first processing chamber for the first process, into the second chamber for reuse thereof. The gas subsequently used in the second chamber is introduced into the first chamber for reuse the gas" (see abstract for instance). This provides a clear evidence that it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Hasegawa to come up with the applicant's invention as specified in claim 5. It would have been obvious to a skilled artisan to supply the gas having being used in the process chamber and the clean booth into the load-lock chamber for reuse the gas. The purpose of doing so would have been to reuse the gas and thereby the operating cost of the apparatus is greatly reduced.

Prior Art Made of Record


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hasegawa et al (U.S.Pat. 5,828,572) and Seaba (U.S.Pat. 6,133,981) teach sample processing system and have been cited for technical background.

Art Unit: 2851

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 703-305-6462. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.



HENRY HUNG NGUYEN
PRIMARY EXAMINER

hvn
May 8, 2003